# Types of
Velocity Dealiasing Errors

Supplement to

Operational Guidelines for the Field Test to Reduce Velocity Dealiasing Errors by Using a 2-D Velocity Dealiasing Scheme
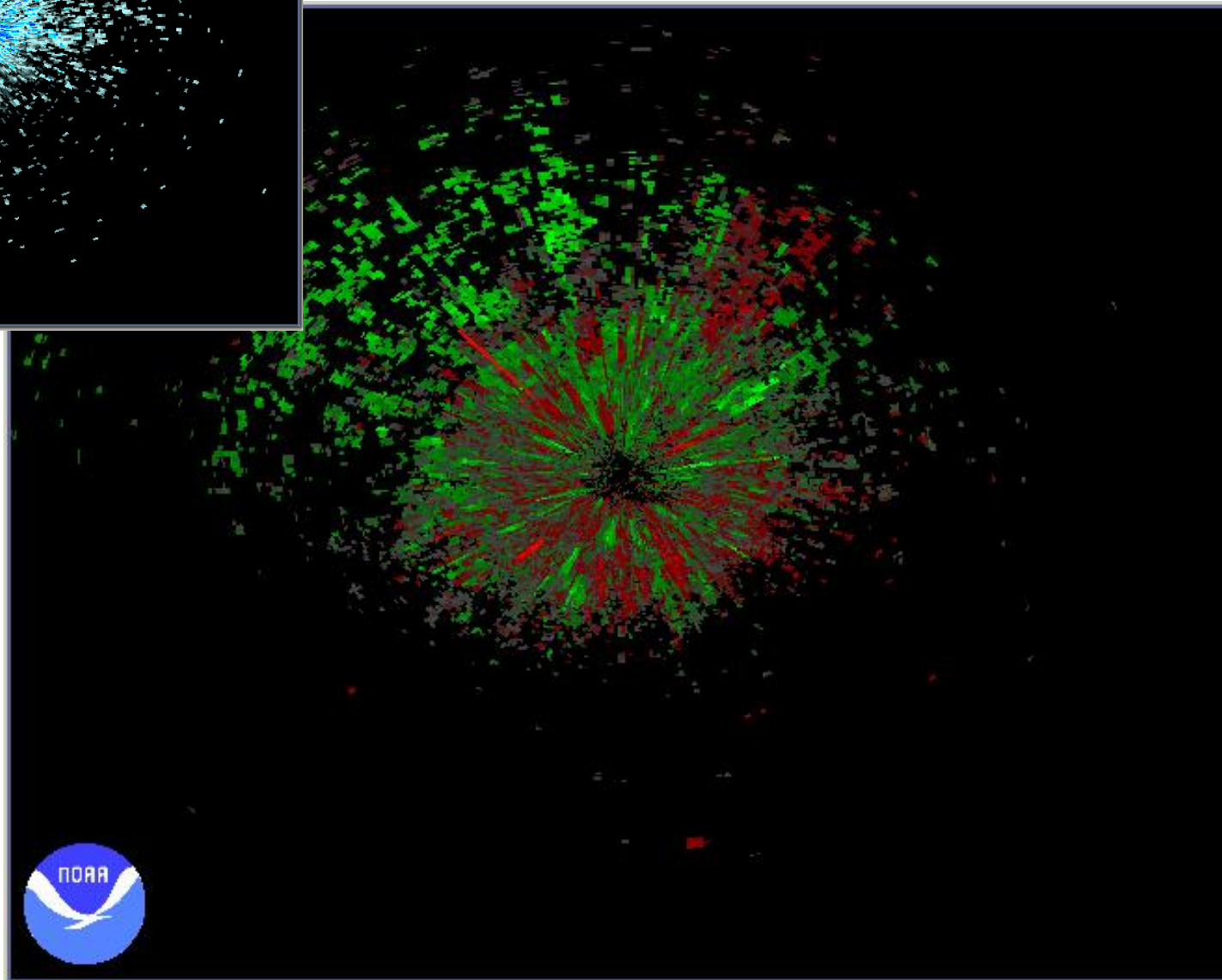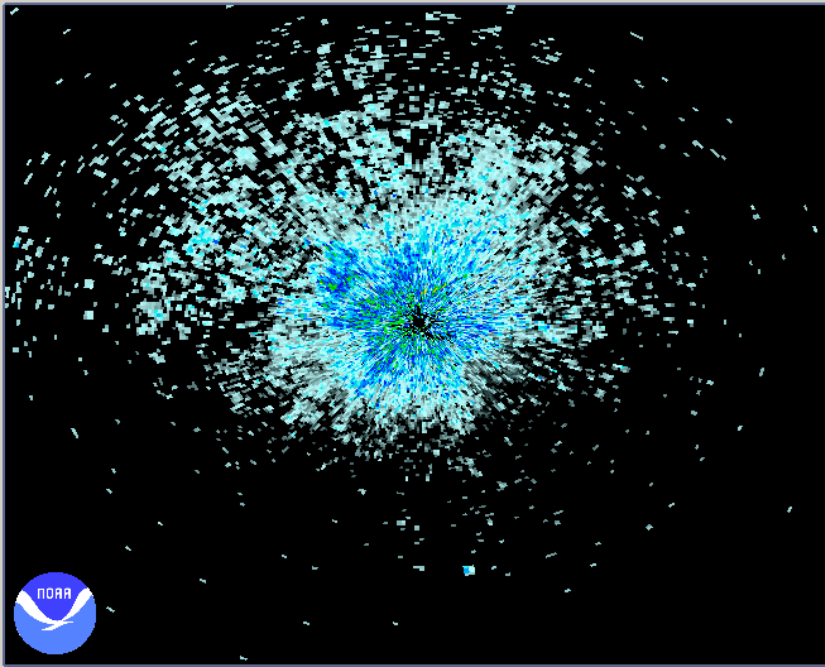
For ECP-0511

Slide Organization

- The following slides illustrate examples of common velocity dealiasing errors. Examples from both algorithms [Velocity Dealiasing Algorithm (VDA) and 2-D Velocity Dealiasing Algorithm (VDEAL)] are shown.
- Types of errors included:
  - Spikes
  - Wedges
  - Patches
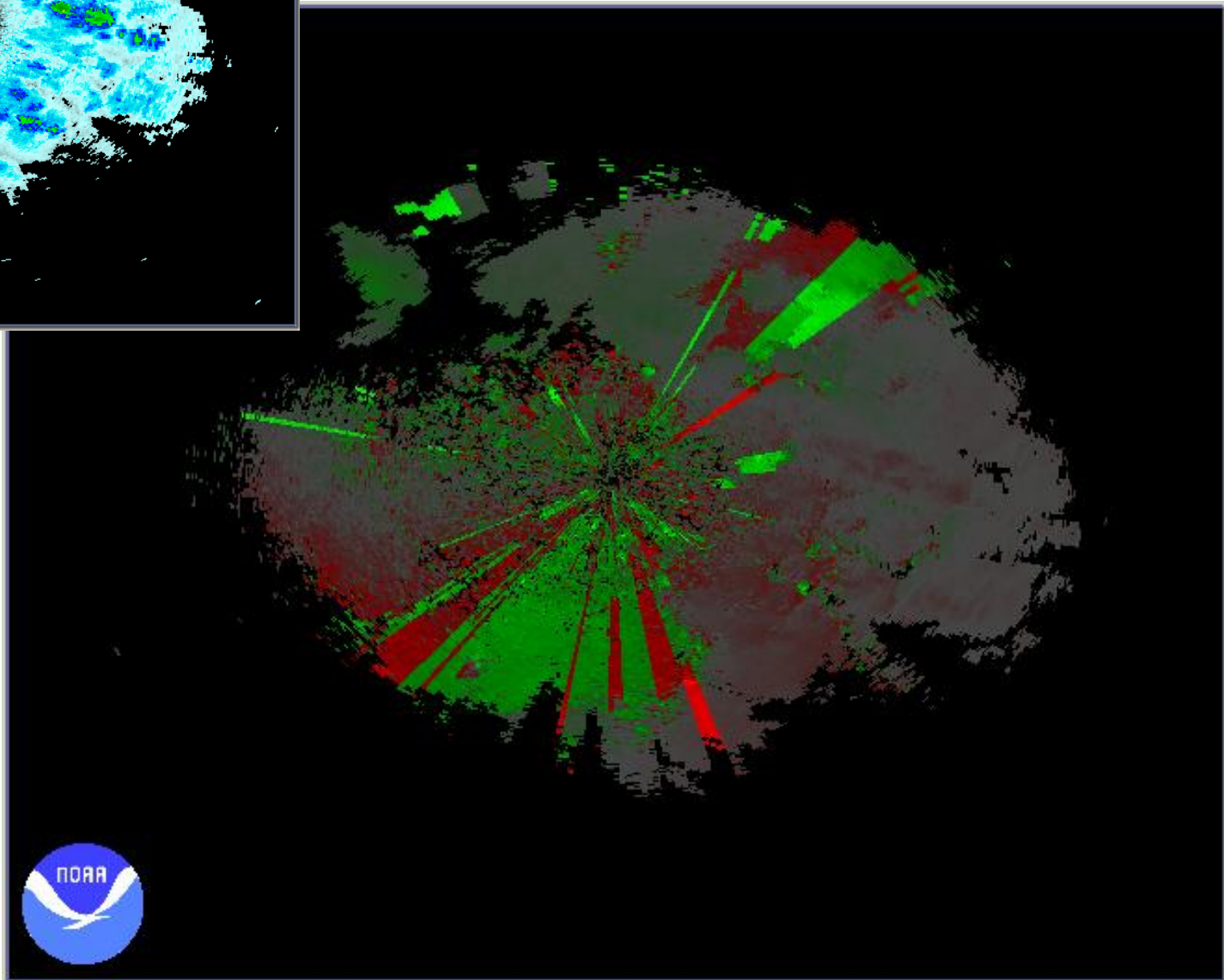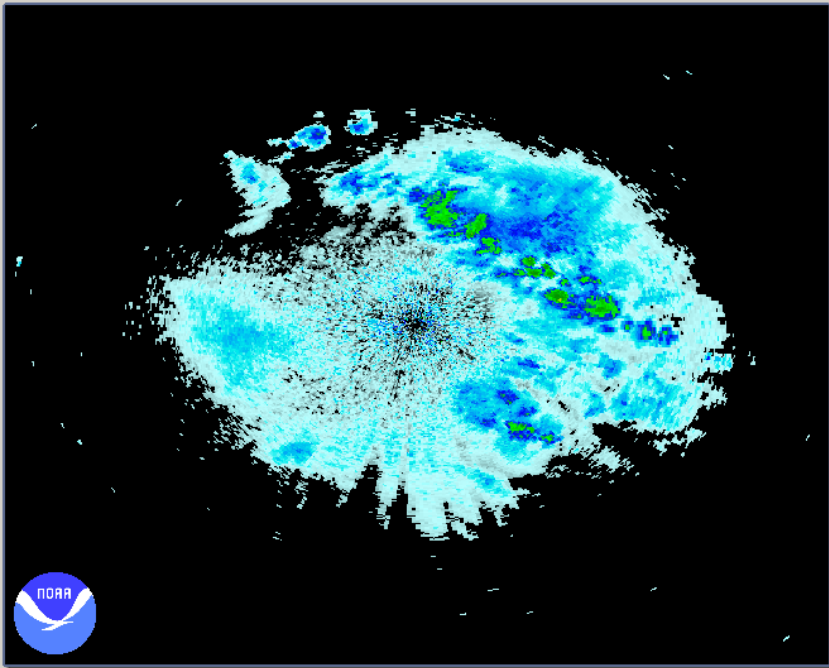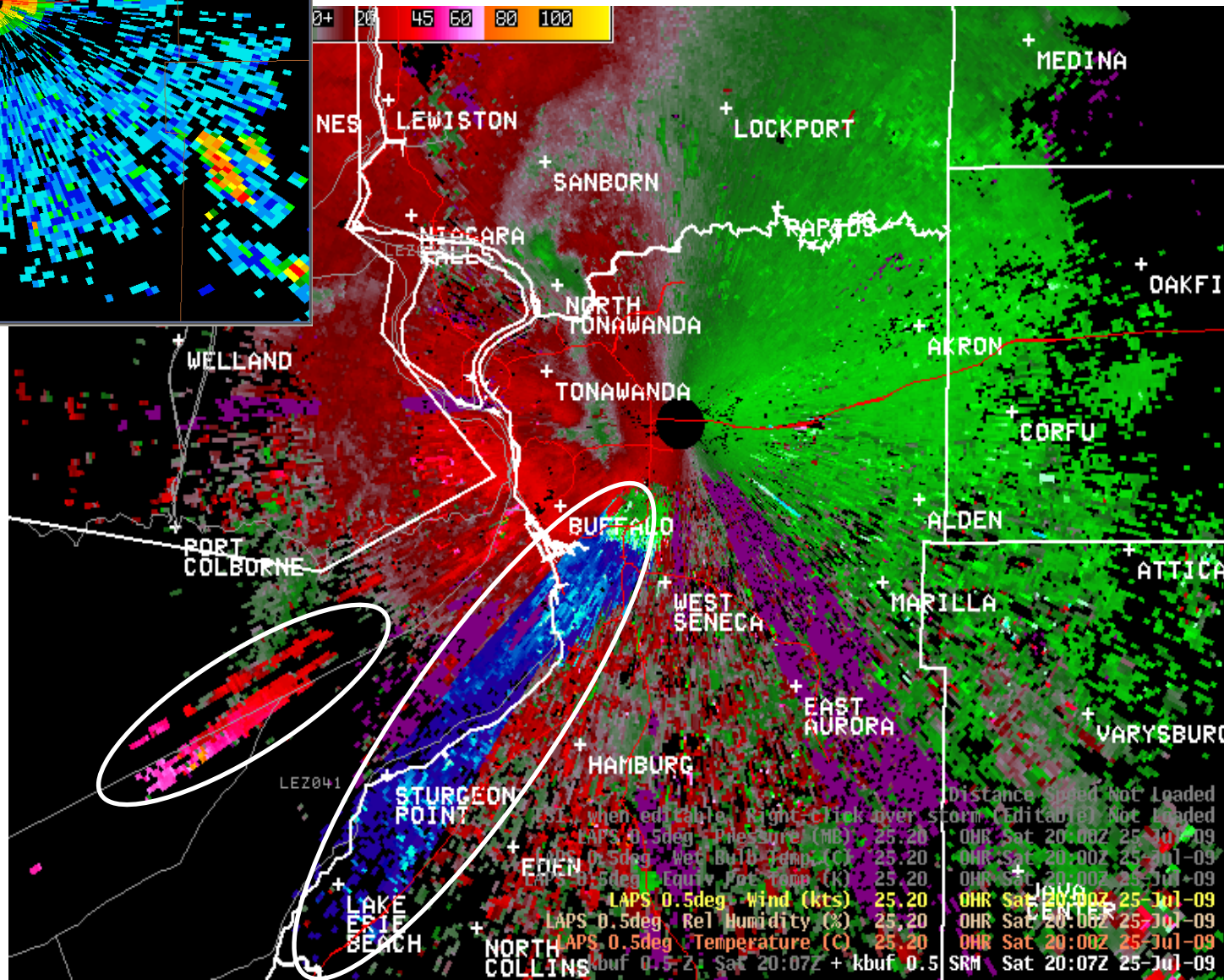 - Combination of Wedges and Patches
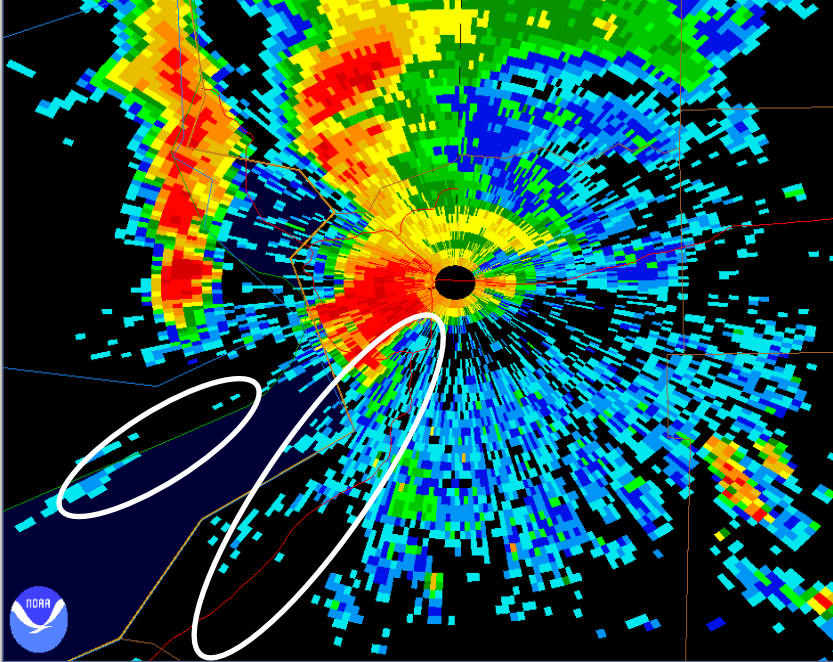- Anomalies not strictly due to dealiasing errors

Example: Spikes
VDA
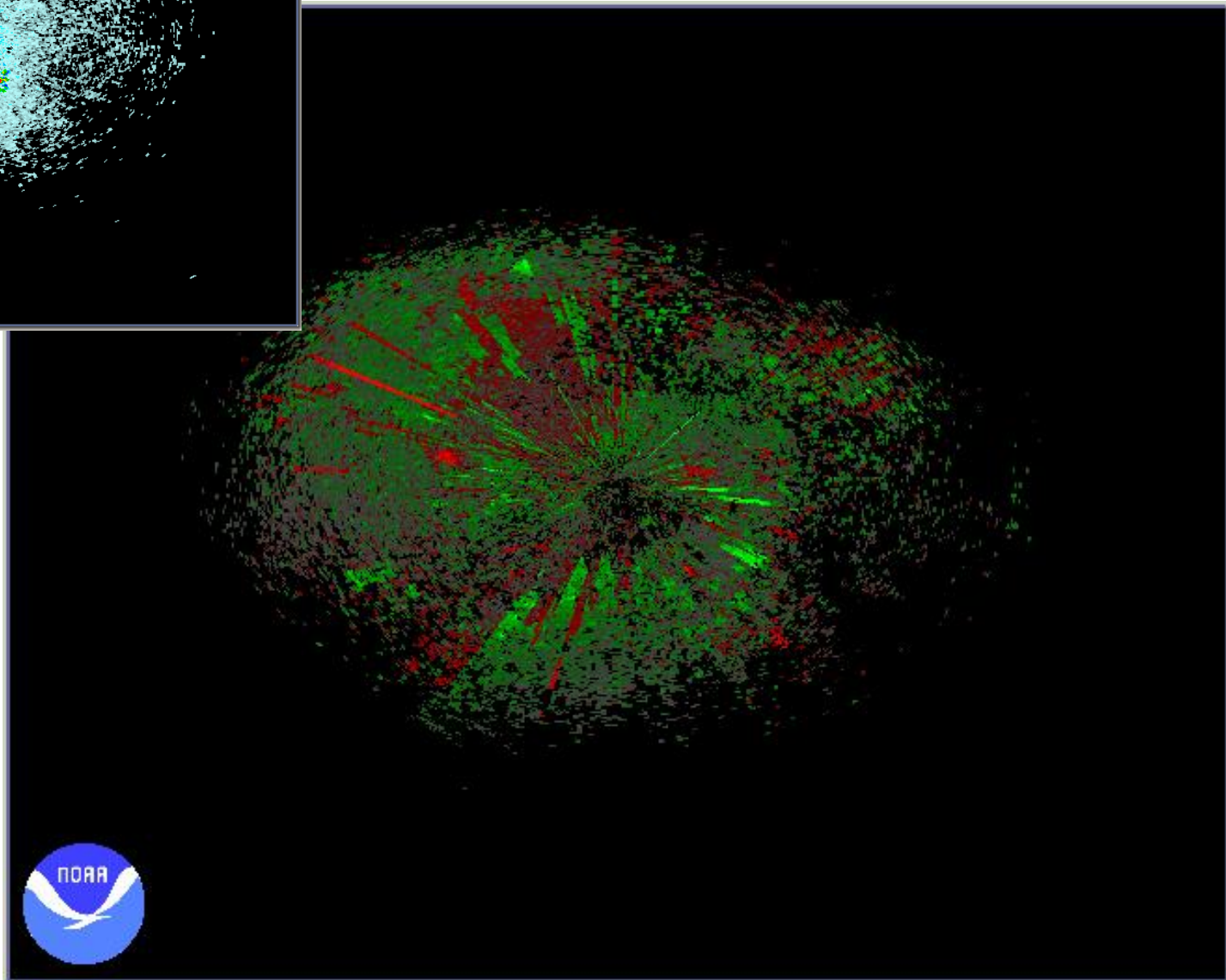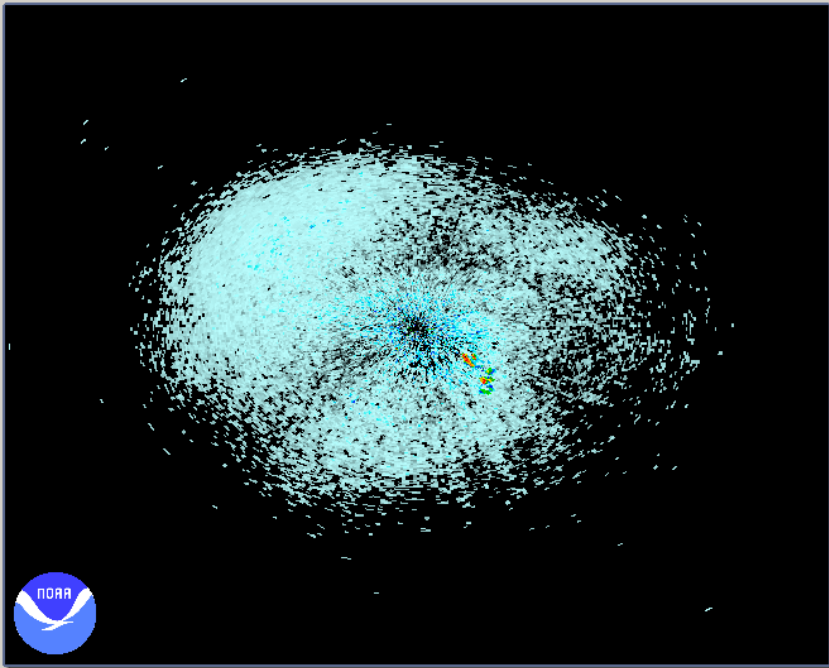
Example: Spikes
VDA
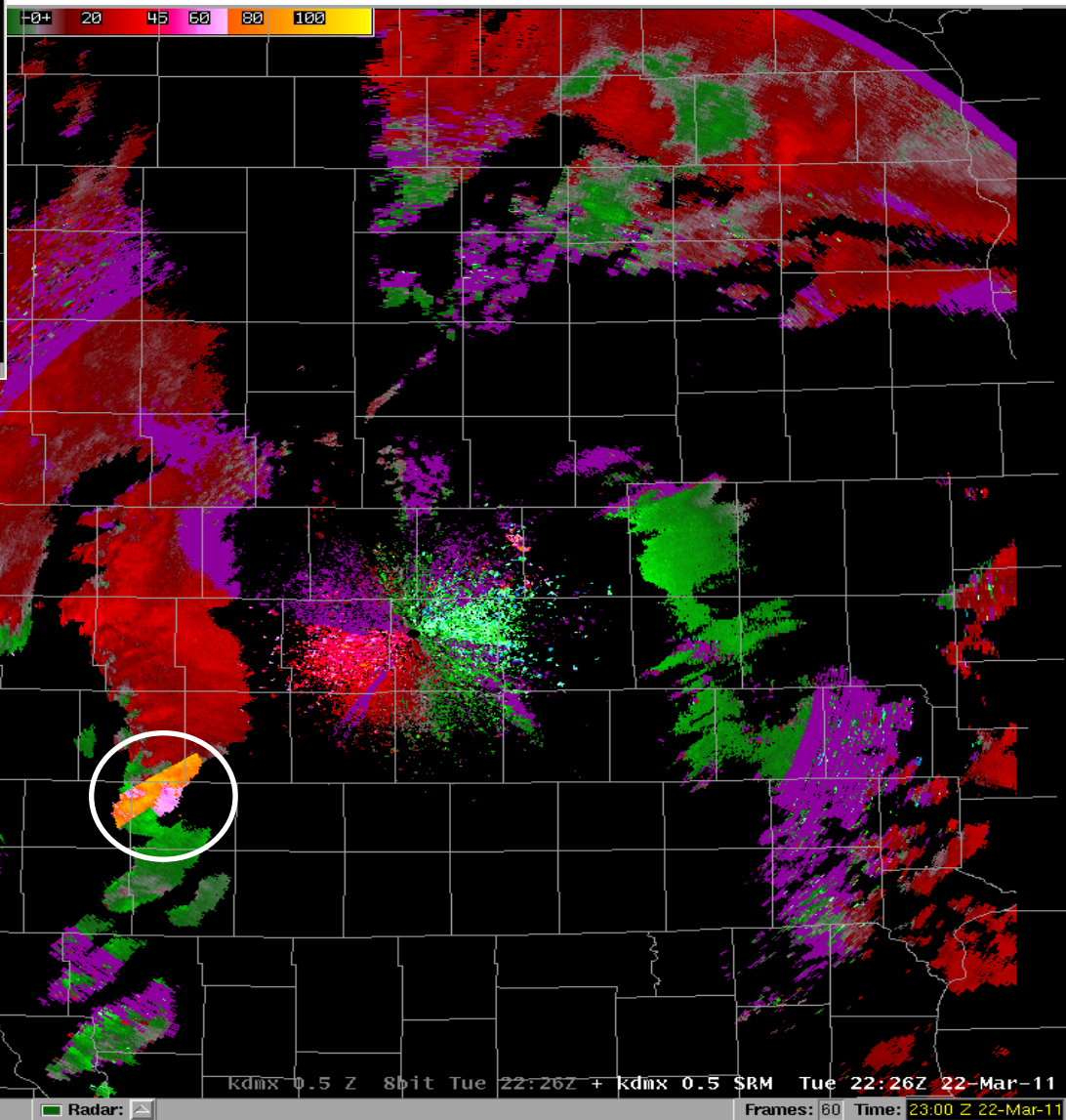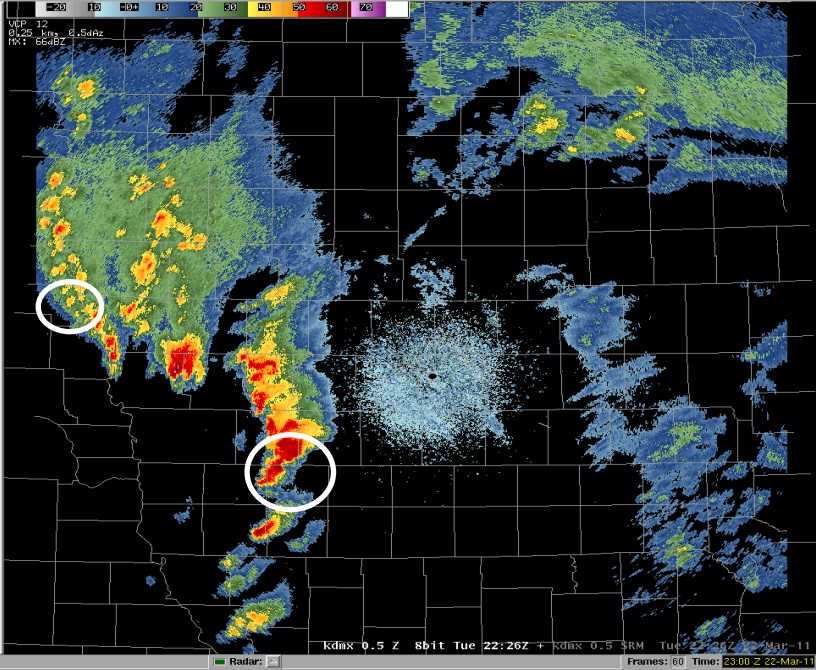
Example: Spikes
VDA

Example: Wedges
VDA

Example: Wedges
VDA

Example: Wedge
VDEAL

KLIX20080901-2D 20080901-180141 Base_Reflectivity_Data_Array_Product 00.50 [18 s behind]

KLIX20080901-2D 20080901-180159 Base_Velocity_Data_Array_Product 00.50
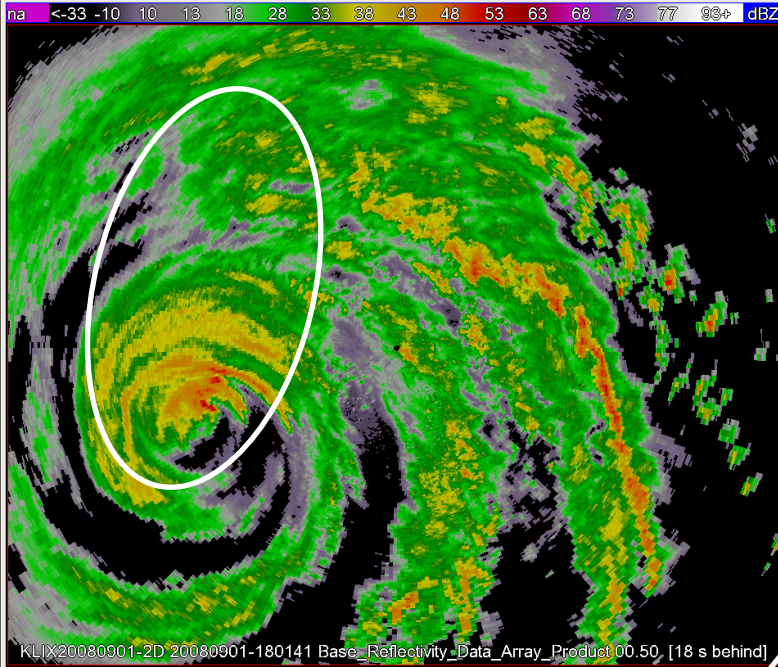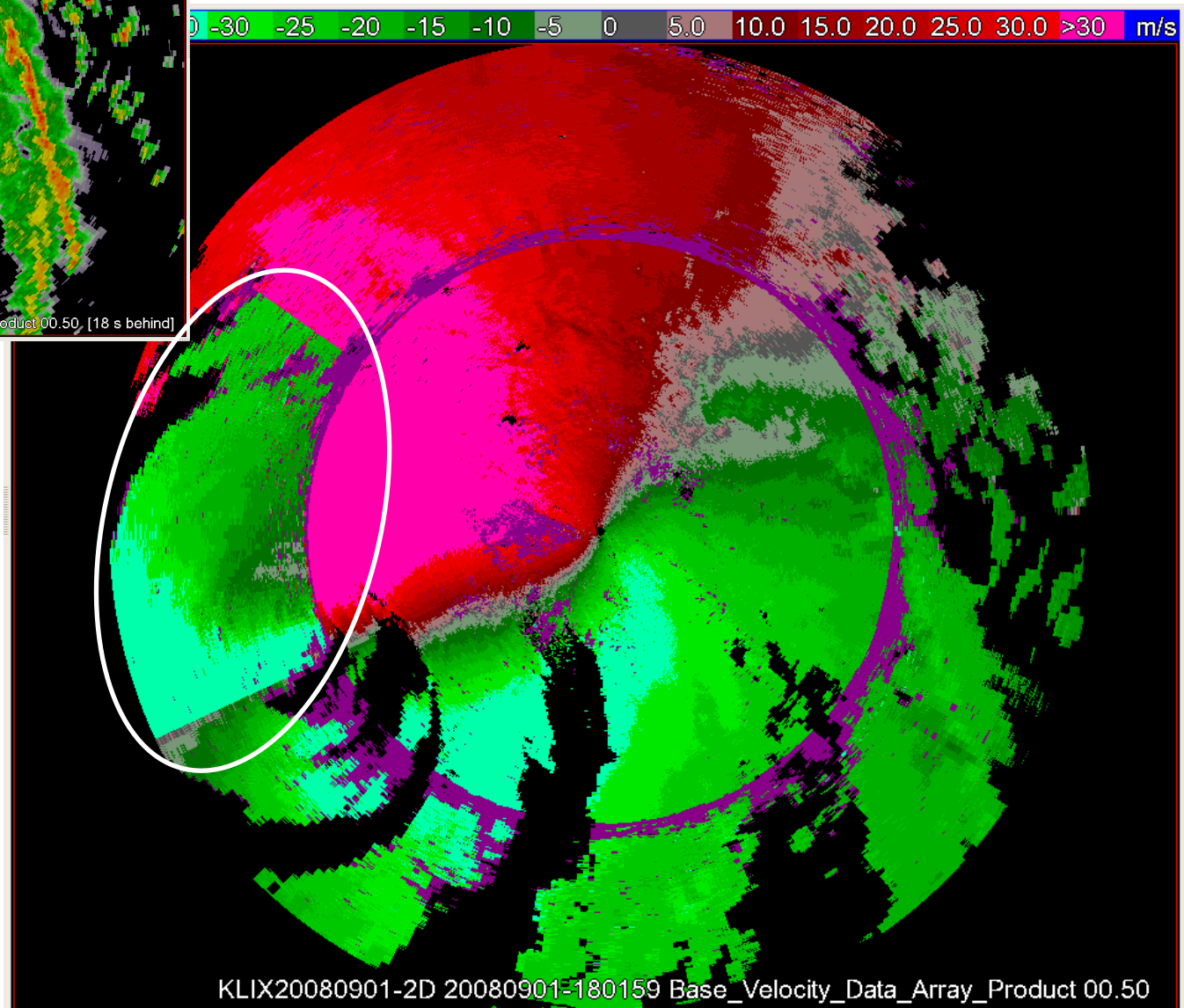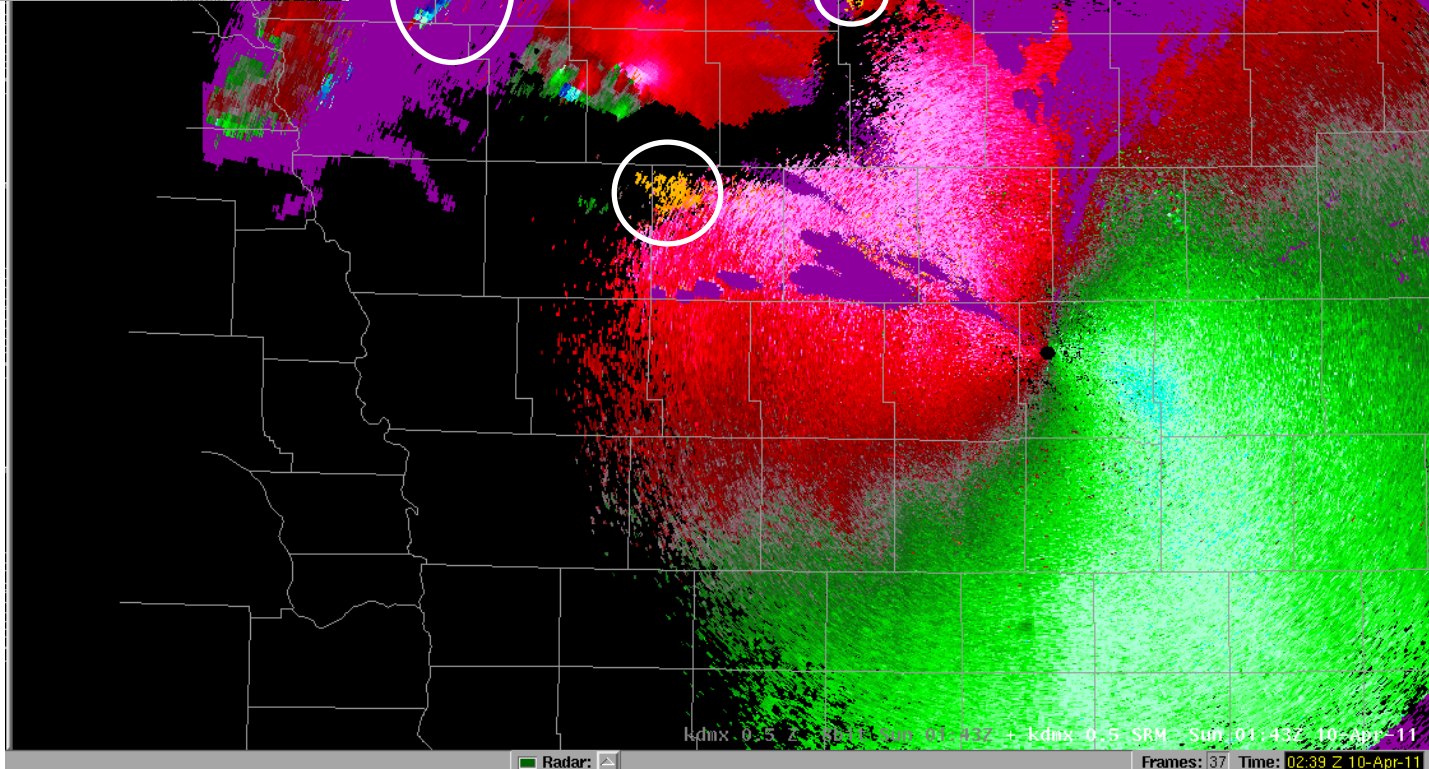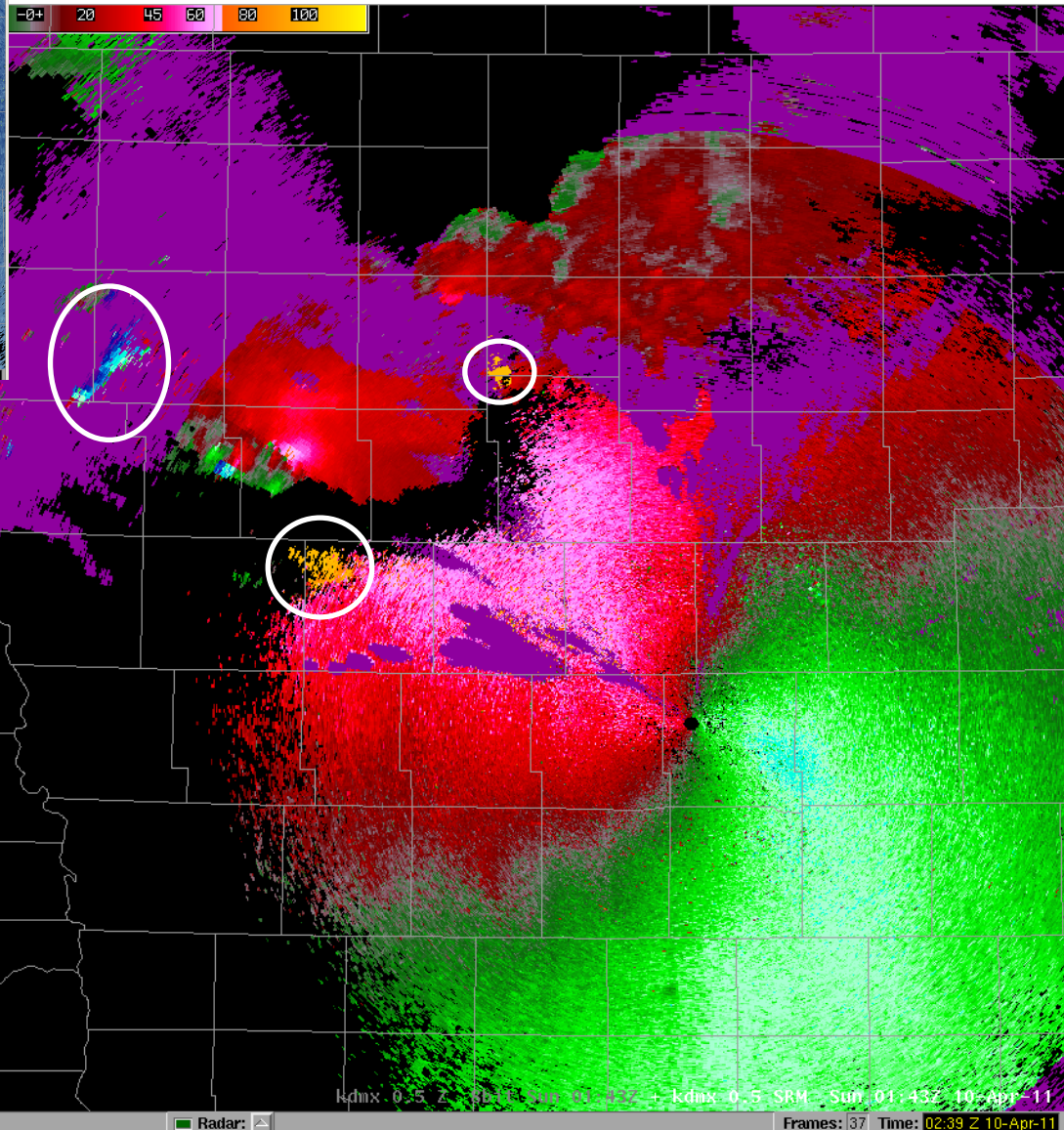
Example: Patch
VDA

Example: Patch
VDEAL

Example: Patch
VDEAL

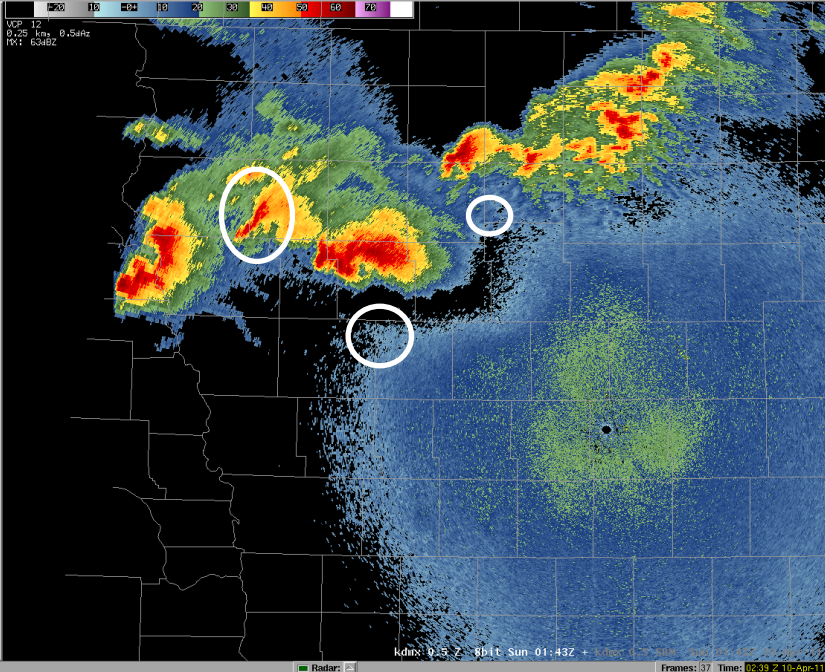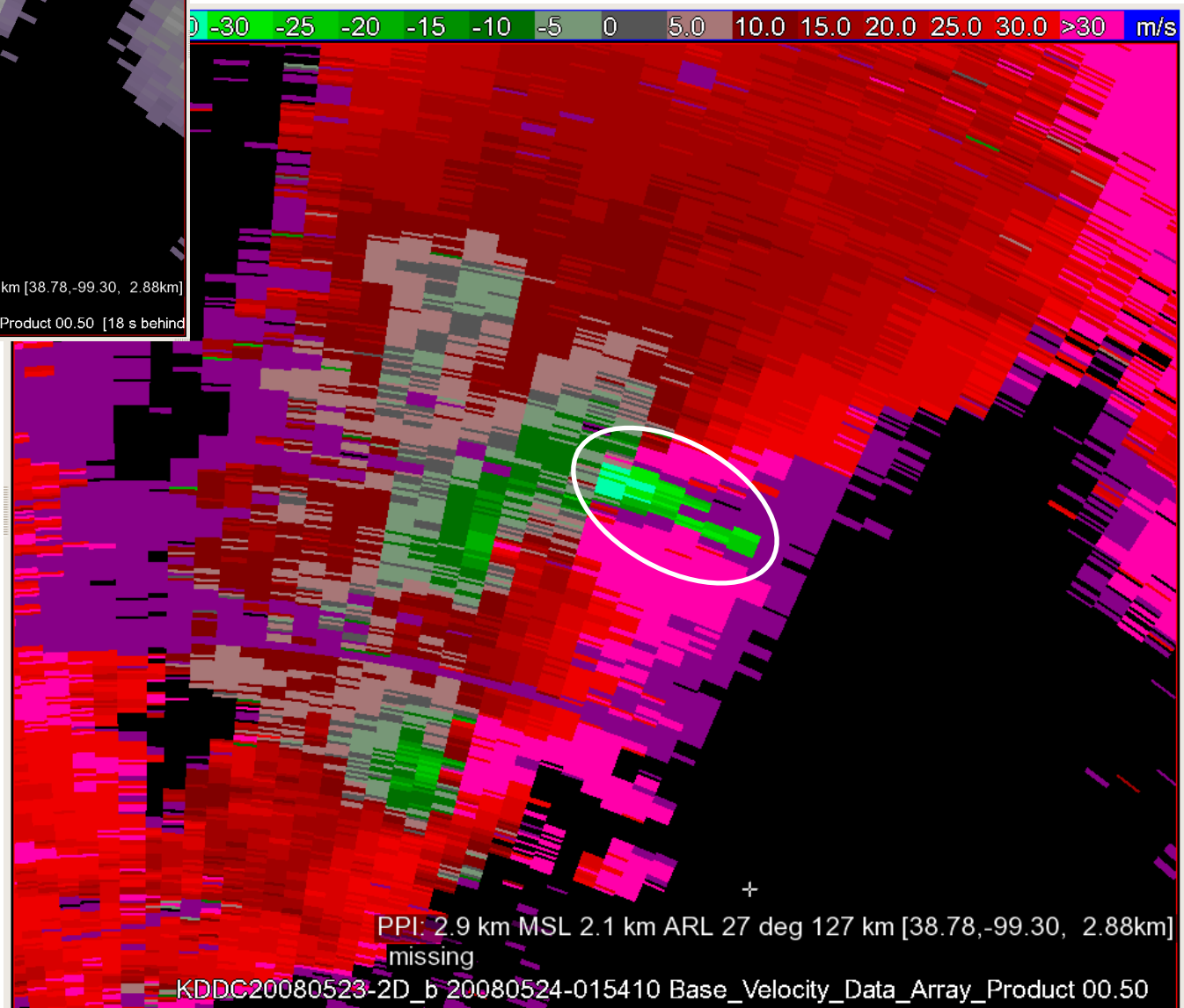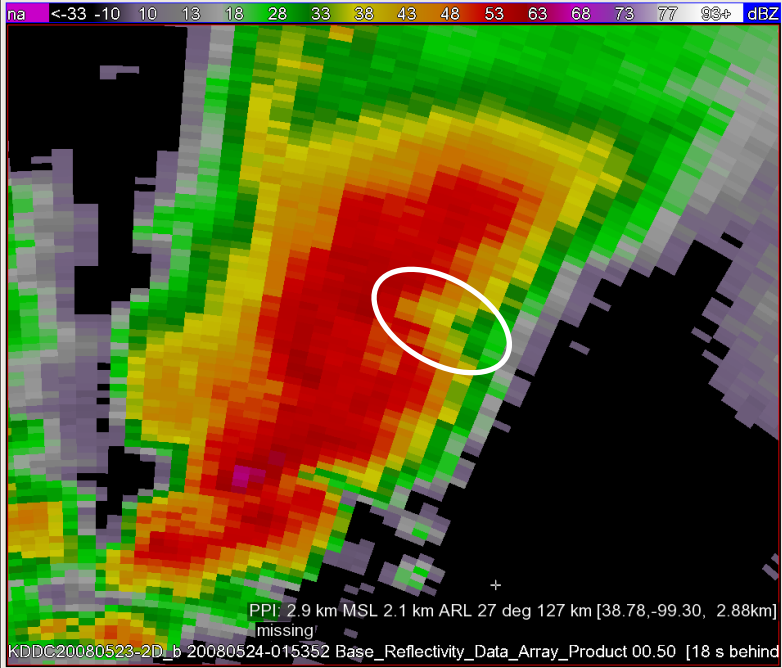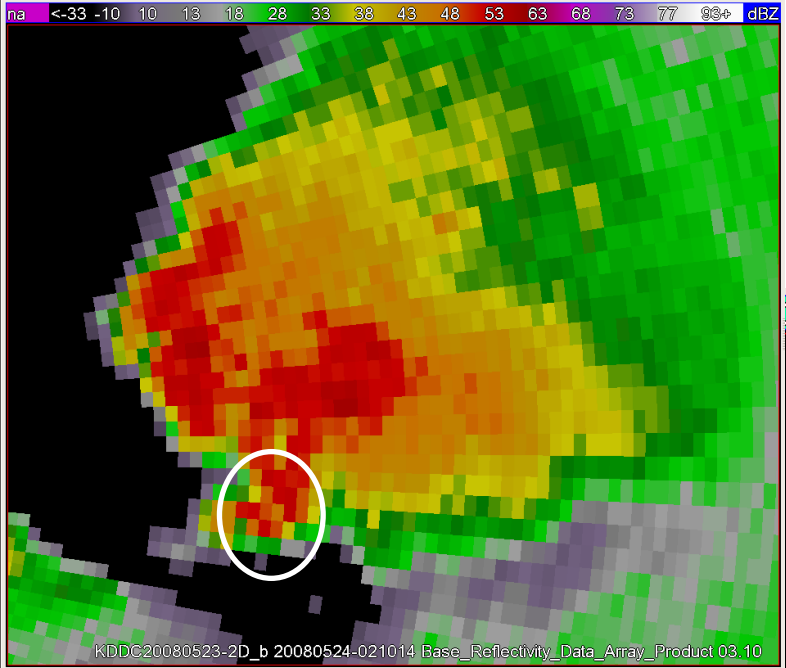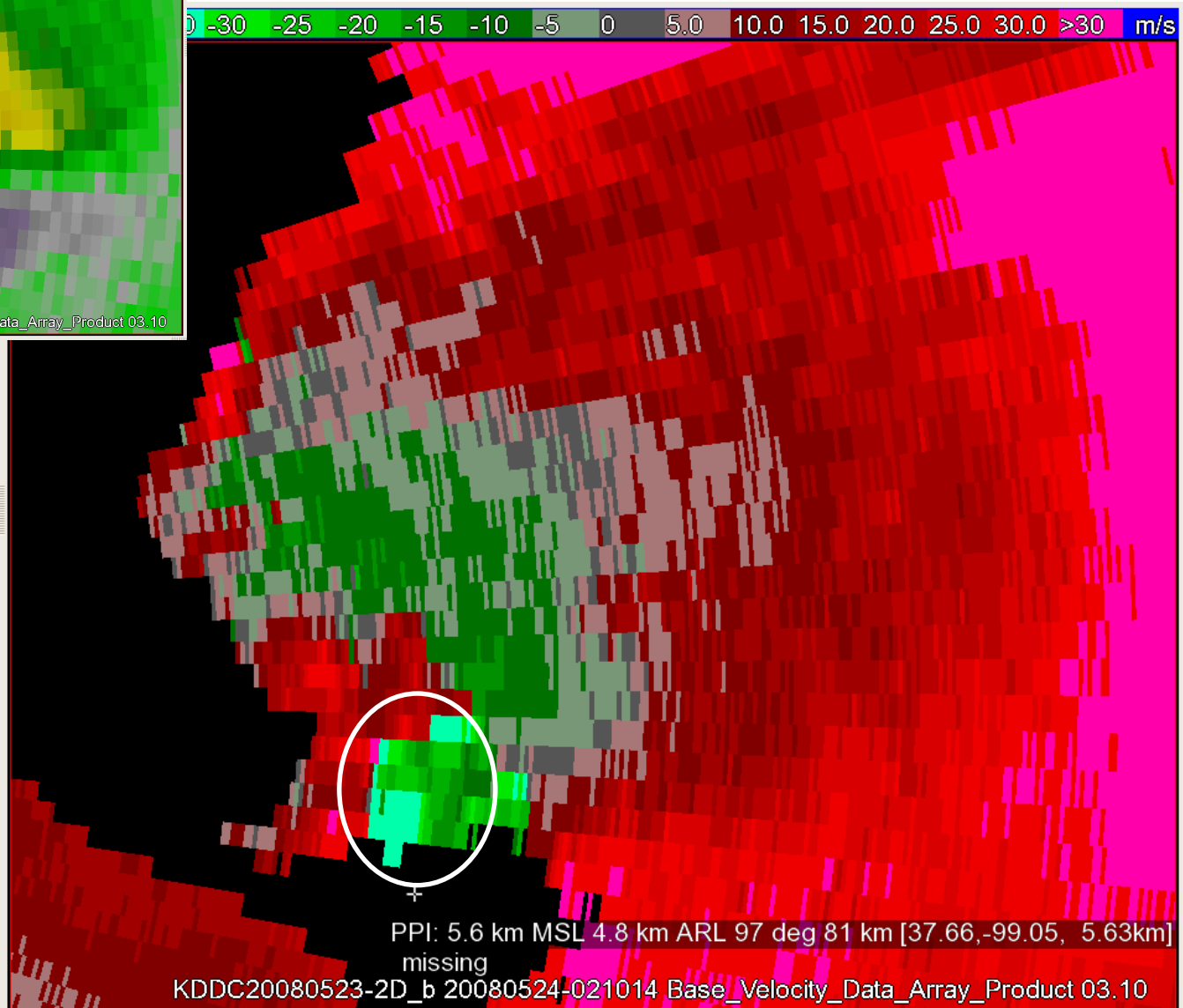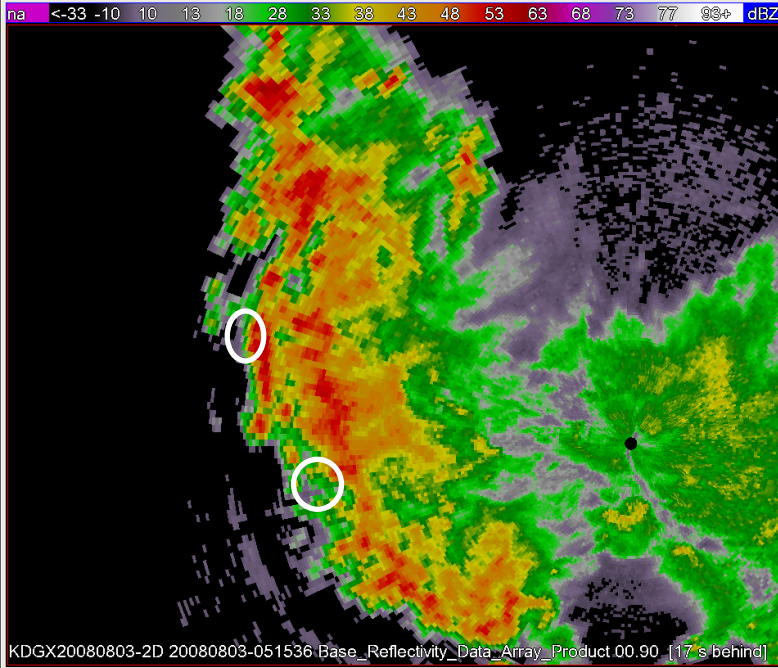na | <-33 | -10 | 10 | 13 | 18 | 28 | 33 | 38 | 43 | 48 | 53 | 63 | 68 | 73 | 77 | 93+ | dBZ

KDDC20080523-2D_b 20080524-021014 Base_Reflectivity_Data_Array_Product 03.10

-30 | -25 | -20 | -15 | -10 | -5 | 0 | 5.0 | 10.0 | 15.0 | 20.0 | 25.0 | 30.0 | >30 | m/s

PPI: 5.6 km MSL 4.8 km ARL 97 deg 81 km [37.66,-99.05, 5.63km]
missing
KDDC20080523-2D_b 20080524-021014 Base_Velocity_Data_Array_Product 03.10

Example: Patch
VDEAL

KDGX20080803-2D 20080803-051536 Base_Reflectivity_Data_Array_Product 00.90 [17 s behind]

KDGX20080803-2D 20080803-051553 Base_Velocity_Data_Array_Product 00.90

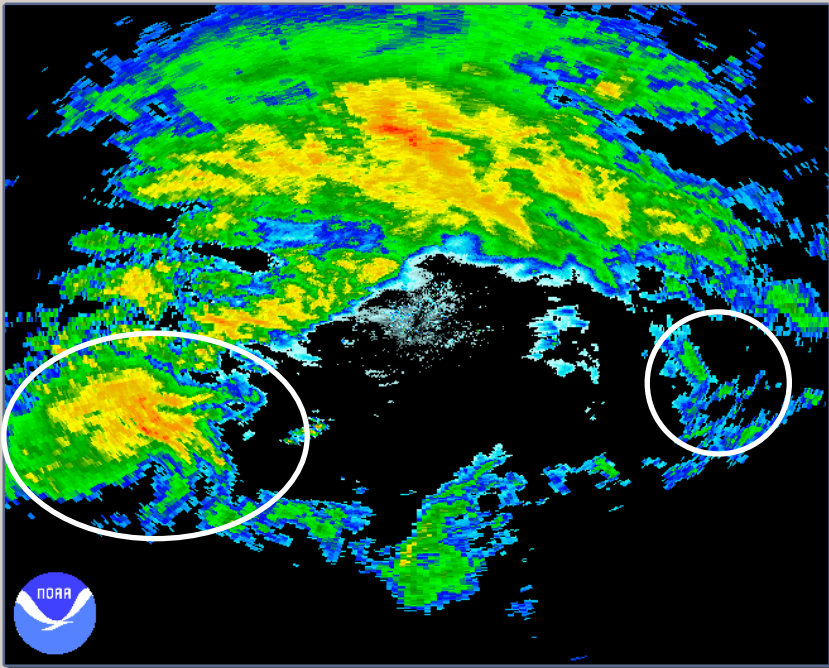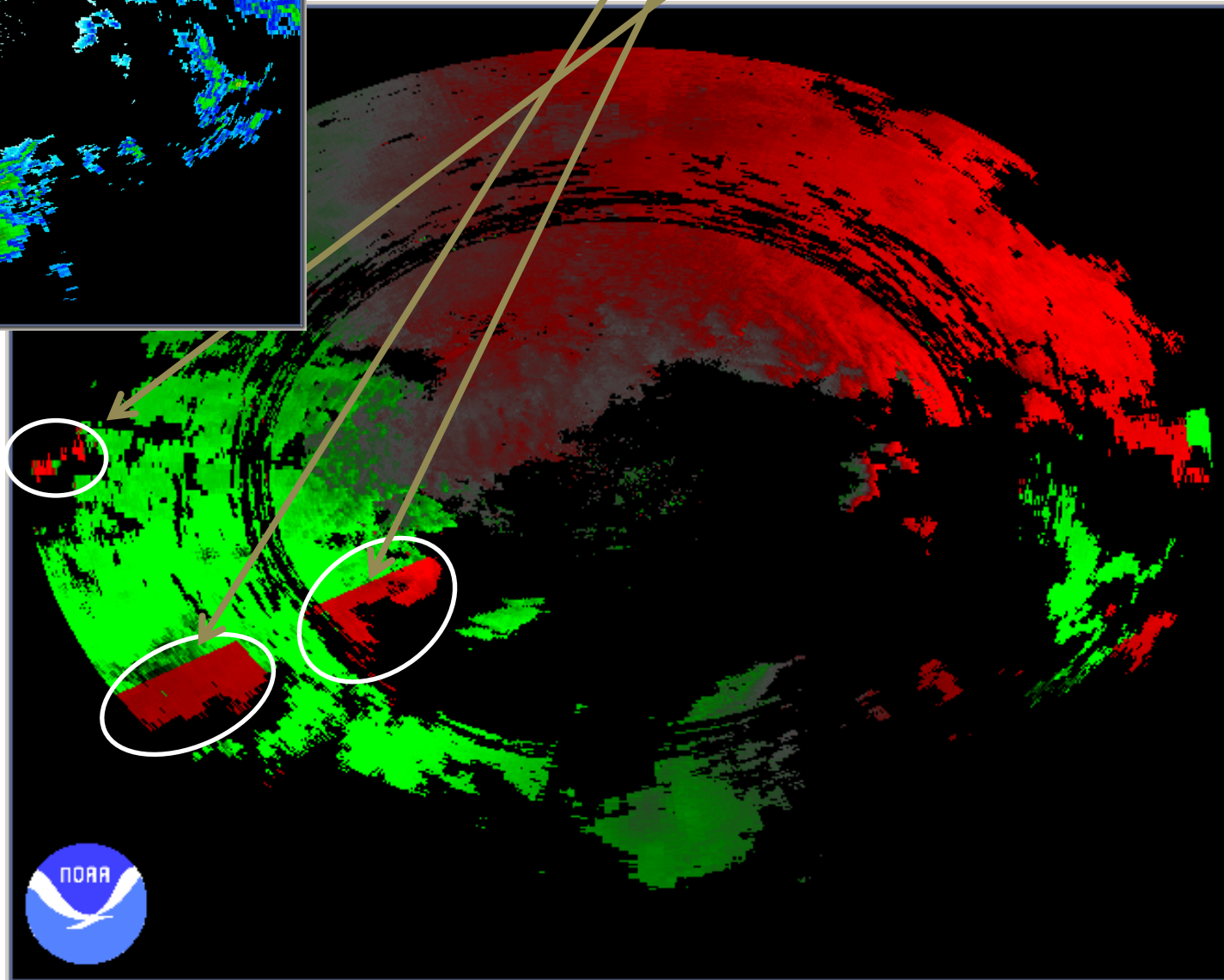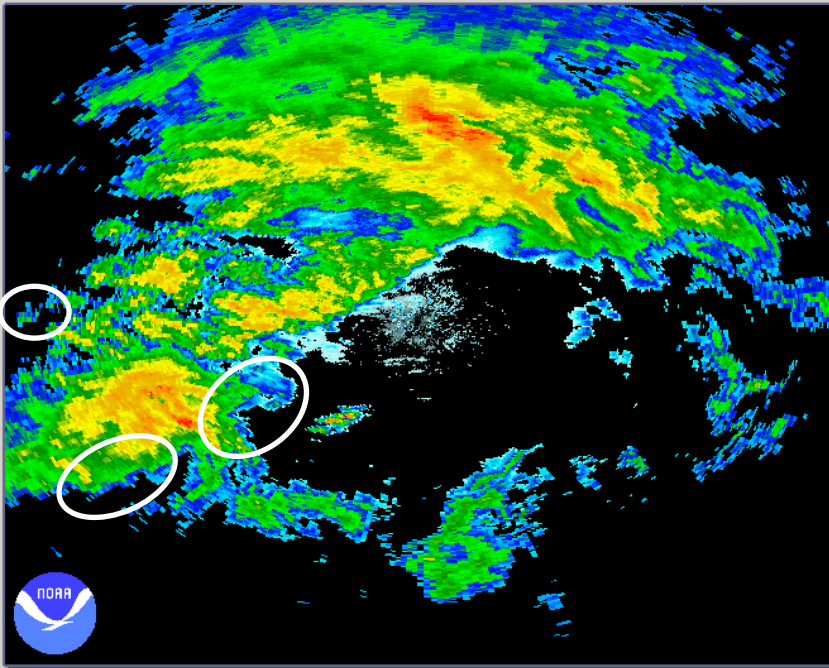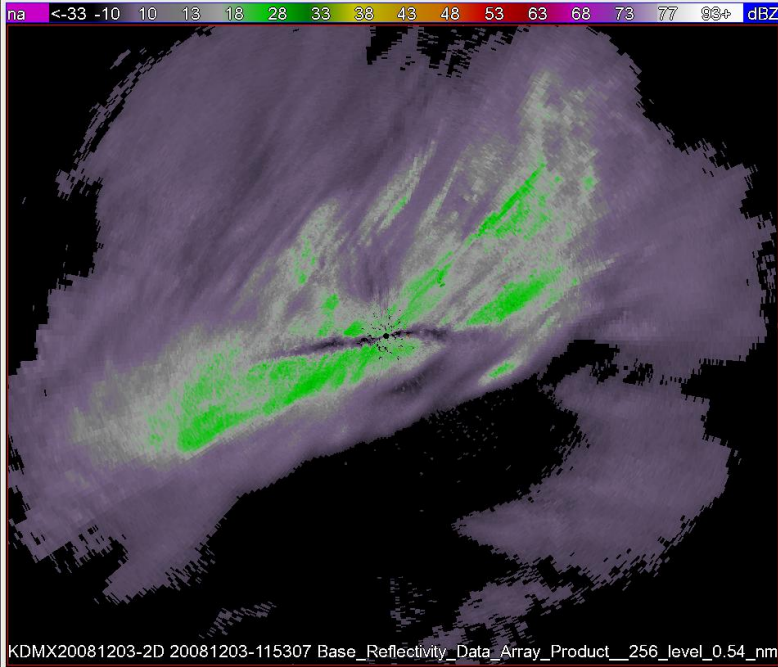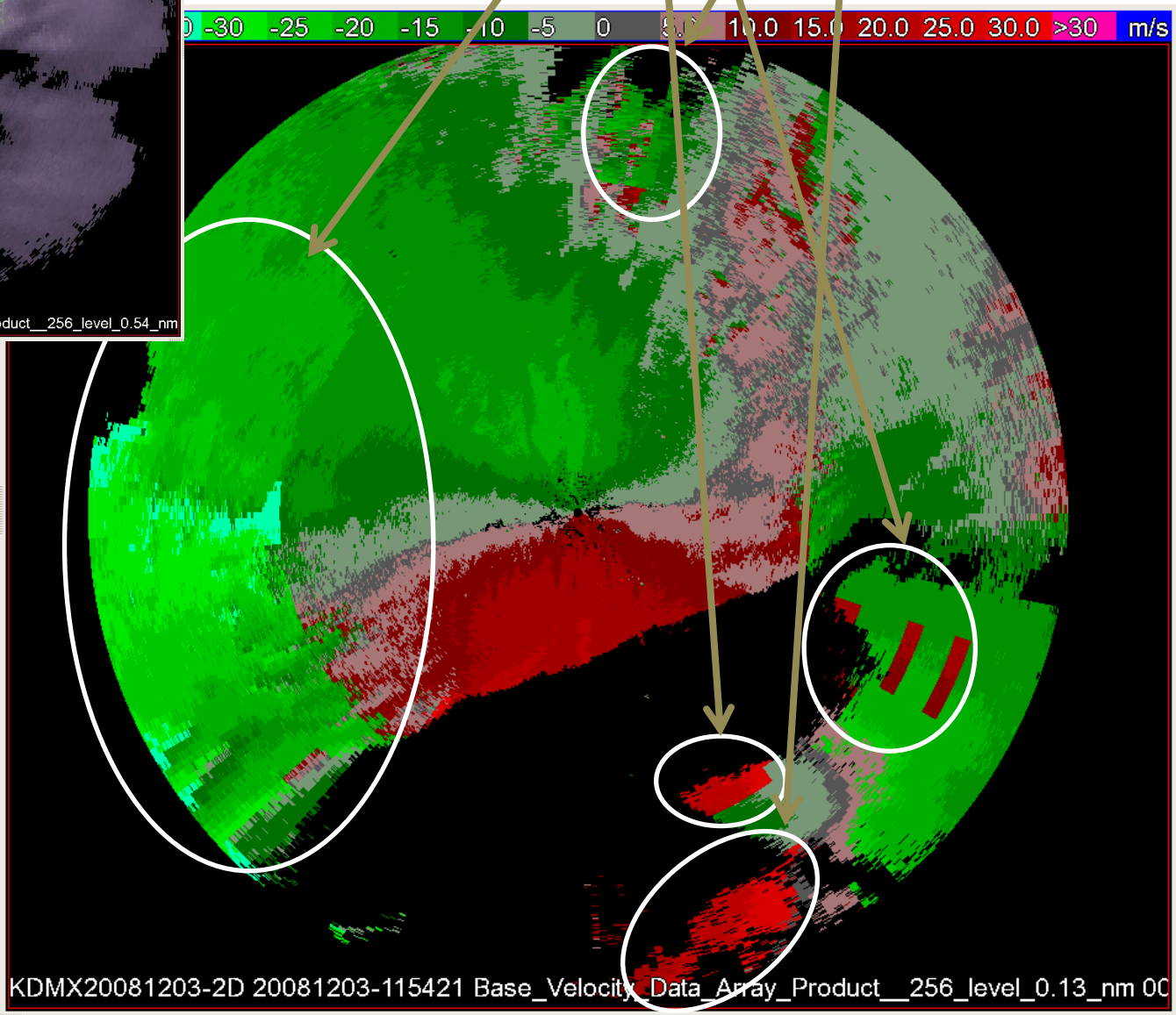Example: Wedge and Patch VDA

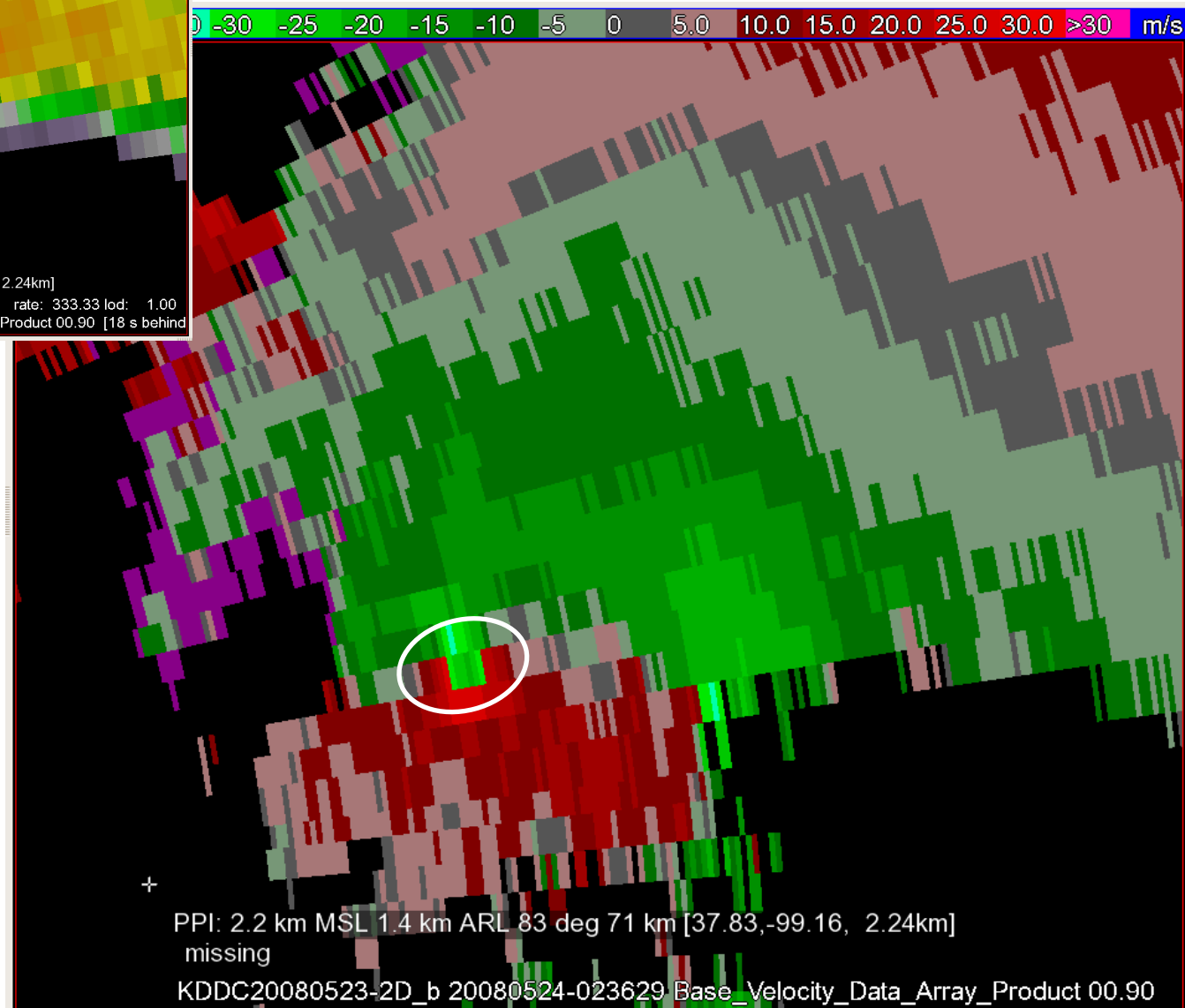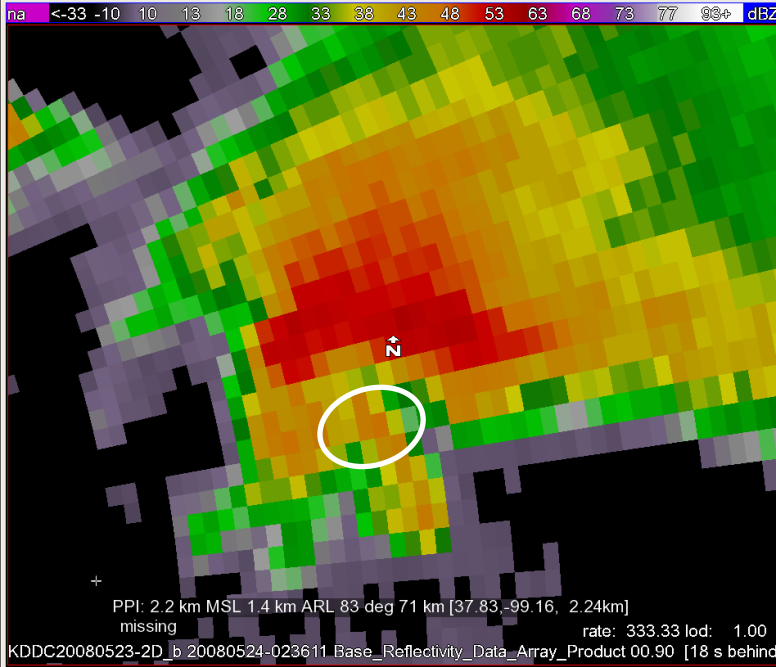Example: Wedge and Patch VDA

Example: Wedge and Patch VDEAL

KDMX20081203-2D 20081203-115307 Base_Reflectivity_Data_Array_Product__256_level_0.54_nm

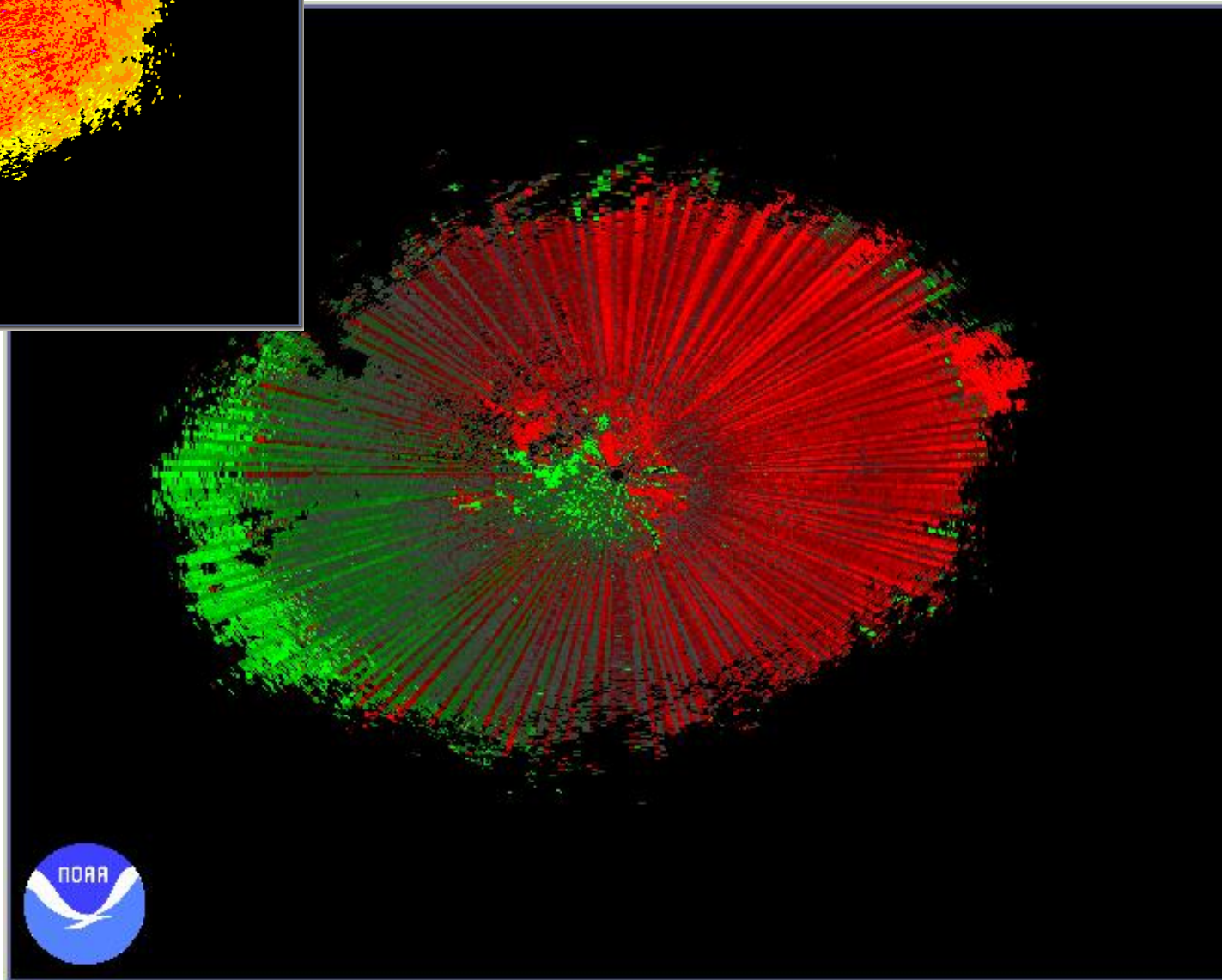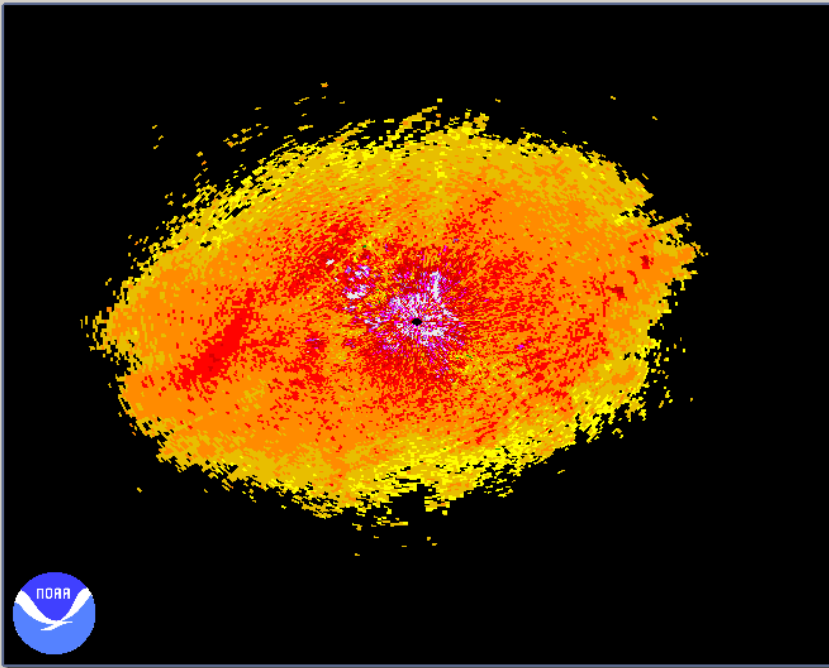KDMX20081203-2D 20081203-115421 Base_Velocity_Data_Array_Product__256_level_0.13_nm 00

Possible dealiasing error:
VDEAL

Other Observations
in Velocity Products
NOT Associated with the
Velocity Dealiasing Algorithm

Non-issue with Velocity Dealiasing Algorithm
Issue with IFD resulted in spikes in velocity

Example of noise in SZ-2 VCP weak trip velocities KHGX Hurricane Ike. The red area embedded in the green inbound region and the green area embedded in the red outbound region indicate this data has not been dealiased.